IN THE CLAIMS

1.-5. (canceled).

6. (previously presented) A method for facilitating a fabrication of a high temperature superconducting electrical machine, said method comprising the steps of:

fabricating a back iron;

attaching a plurality of non-magnetic teeth to the back iron wherein at least one non-magnetic tooth includes at least one embedded conductor; and

installing the back iron in the machine.

7. (currently amended) A method for fabricating a stator with non-magnetic teeth, the stator including a non-magnetic tooth back portion including a plurality of non-magnetic teeth and a back portion, the non-magnetic teeth unitary with each other and with the back portion, said method comprises the steps of:

fabricating a back iron; and

attaching the non-magnetic tooth back portion to the back iron, wherein the non-magnetic tooth back portion includes at least one embedded conductor.

8. (original) A method according to Claim 7 wherein said step of attaching a plurality of non-magnetic teeth further comprises the step of attaching a substantially circular back portion unitary with the plurality of non-magnetic teeth to the back iron.

9. (original) A method according to Claim 8 wherein said step of attaching a plurality of non-magnetic teeth further comprises the step of attaching a substantially circular back portion unitary with the plurality of non-magnetic teeth to the back iron with a key.

10. (previously presented) A method according to Claim 7 wherein said step of attaching a plurality of non-magnetic teeth further comprises the step of attaching a plurality

of non-magnetic teeth comprising at least one of a carbon fiber and a fiber polymer to the back iron.

11. (canceled).

12. (currently amended) A stator comprising:

a back iron; and

a plurality of non-magnetic teeth unitary with each other and with a back portion, said back portion mounted on said back iron, wherein at least one said non-magnetic tooth comprises at least one embedded conductor.

13. (original) A stator according to Claim 12 wherein said back portion is substantially circular.

14. (original) A stator according to Claim 13 further comprising at least one key extending from said back portion.

15. (original) A stator according to Claim 12 wherein said back portion is mounted on said back iron with a key.

16. (original) A stator according to Claim 12 wherein said non-magnetic teeth comprise at least one of a glass laminate, a carbon fiber, and a fiber polymer.

17. (canceled).

18. (currently amended) A dynamoelectric machine comprising:

a housing;

a stator comprising a bore therethrough mounted in said housing, said stator comprising a back iron and a plurality of non-magnetic teeth unitary each other and with a

back portion, said back portion mounted to said back iron, wherein at least one of said non-magnetic teeth comprises at least one embedded conductor;

a plurality of armature windings mounted on said teeth; and

a rotor rotatably mounted in said bore, said rotor comprising a plurality of field windings.

19. (original) A machine according to Claim 18 wherein said back section is substantially circular.

20. (original) A machine according to Claim 18 wherein said field windings are superconducting field windings.

21. (original) A machine according to Claim 20 further comprising:

a rotor jacket surrounding said field windings; and

a vacuum pump in flow communication with an interior of said rotor jacket.

22. (original) A machine according to Claim 21 further comprising a cryogenic cooler coupled to said rotor shaft.

23. (original) A machine according to Claim 18 wherein said field windings configured for synchronous operation with said armature windings.

24. (original) A machine according to Claim 18 wherein said back portion keyed to said back iron.

25. (original) A machine according to Claim 24 wherein said back portion adhesively bonded to said back iron.

26. (original) A machine according to Claim 18 wherein said non-magnetic teeth comprise at least one of a glass laminate, a fiber polymer, and a carbon fiber.

27. (canceled).

28. (previously presented) A stator comprising:

a back iron; and

a plurality of non-magnetic teeth unitary with a back portion, wherein at least one non-magnetic tooth includes at least one embedded conductor, said back portion mounted on said back iron.